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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,594	05/17/2006	Antonio Buxade Vinas	CUR10326P00010US	3552
32116 7590 03/29/2010 WOOD, PHILLIPS, KATZ, CLARK & MORTIMER 500 W. MADISON STREET SUITE 3800 CHICAGO, IL 60661				
EXAMINER				
OH, TAYLOR V				
ART UNIT		PAPER NUMBER		
1625				
MAIL DATE		DELIVERY MODE		
03/29/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/579,594

**Applicant(s)**

VINAS ET AL.

**Examiner**

Taylor Victor Oh

**Art Unit**

1625

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 September 0122.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 3,7 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8-17 and 19-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Final Rejection***

**The Status of Claims**

Claims 1-24 are pending.

Claims 1-2,4-6,8-17,19-24 are rejected.

Claims 3,7,18 are withdrawn from consideration .

**Priority**

2. In order to correct the previous inadvertent mistake made in the priority; it is noted that this application is a 371 of PCT/ES04/00511(November 17 , 2004), which has a foreign priority document, Spain P200302806 (11/28/2003).

**The Specification**

The specification is objected to because of the following informalities:

The amendment filed on 12/22/09 for the specification has introduced new paragraphs on page 4, after line 22: “

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Those described hydroxyl protective groups are ethers, esters, and, for 1,2- and 1,3-DIOLS, cyclic acetals and ketals and cyclic ortho esters.

The ethers include:

Methyl

**Substituted Methyl Ethers**

Methoxymethyl (MOM Group)

Methylthiomethyl (MTM Group)

Benzylloxymethyl

*t*-Butyloxymethyl

2-Methoxyethoxymethyl (MEM Group)

2,2,2-Trichloroethoxymethyl

Bis(2-chloroethoxy)methyl

2-(Trimethylsilyl)ethoxymethyl

Tetrahydropyranyl (THP Group)

3-Bromotetrahydropyranyl

Tetrahydrothiopyranyl

4-Methoxytetrahydropyranyl

4-Methoxytetrahydrothiopyranyl

4-Methoxytetrahydrothiopyranyl S,S-Dioxido

Tetrahydrofuranyl

Tetrahydrothiofuranyl

**Substituted Ethyl Ethers**

1-Ethoxyethyl

1-Methyl-1-methoxyethyl

1-(Isopropoxy)ethyl

2,2,2-Trichloroethyl

2-(Phenylselenyl)ethyl

*t*-Butyl

Allyl

Cinnamyl

*p*-Chlorophenyl

Benzyl

*p*-Methoxybenzyl

*o*-Nitrobenzyl

*p*-Nitrobenzyl

*p*-Halobenzyl

*p*-Cyanobenzyl

3-Methyl-2-picolyi N-Oxido  
Diphenylmethyl  
5-Dibenzosuberyl  
Triphenylmethyl  
     $\alpha$ -Naphthyldiphenylmethyl  
    *p*-Methoxyphenyldiphenylmethyl  
    *p*-(*p*-Bromophenacyloxy)phenyldiphenylmethyl  
9-Anthryl  
9-(9-Phenyl)xanthenyl  
9-(9-Phenyl-10-oxo)anthryl (Tritylone Group)  
Benzisothiazolyl S,S-Dioxido  
**Silyl Ethers**  
    Trimethylsilyl (TMS Group)  
    Triethylsilyl  
    Isopropyl dimethylsilyl  
    *t*-Butyldimethylsilyl (TBDMS Group)  
    (Triphenylmethyl)dimethylsilyl  
    *t*-Butyldiphenylsilyl  
    Methyldiisopropylsilyl  
    Methyl-di-*t*-butylsilyl  
    Tribenzylsilyl  
        Tri-*p*-xylylsilyl  
    Triisopropylsilyl  
    Triphenylsilyl

The esters include:

Formate  
    Benzoylformate  
Acetate  
    Chloroacetate  
    Dichloroacetate  
    Trichloroacetate  
    Trifluoroacetate  
    Methoxyacetate  
    Triphenylmethoxyacetate  
    Phenoxyacetate  
        *p*-Chlorophenoxyacetate  
        2,6-Dichloro-4-methylphenoxyacetate  
        2,6-Dichloro-4-(1,1,3,3-tetramethylbutyl)phenoxyacetate  
        2,4-Bis(1,1-dimethylpropyl)phenoxyacetate  
    Chlorodiphenylacetate  
    *p*-@-Phenylacetate  
3-Phenylpropionate  
3-Benzoylpropionate

Isobutyrate  
Monosuccinate  
4-Oxopentanoate (Levulinate)  
Pivaloate  
Adamantoate  
Crotonate  
    4-Methoxycrotonate  
(*E*)-2-Methyl-2-butenoate (Tigloate)  
Benzoate  
    *o*-(Dibromomethyl)benzoate  
    *o*-(Methoxycarbonyl)benzoate  
    *p*-Phenylbenzoate  
    2,4,6-Trimethylbenzoate (Mesitoate)  
    *p*- $\alpha$ -Benzoate  
 $\alpha$ -Naphthoate

**Carbonates**

Methyl  
Ethyl  
2,2,2-Trichloroethyl  
Isobutyl  
Vinyl  
Allyl  
Cinnamyl  
*p*-Nitrophenyl  
Benzyl  
    *p*-Methoxybenzyl  
    3,4-Dimethoxybenzyl  
    *o*-Nitrobenzyl  
    *p*-Nitrobenzyl  
    *S*-Benzyl Thiocarbonate

**Miscellaneous**

*N*-Phenylcarbamate  
*N*-Imidazolylcarbamate  
Borate  
Nitrate  
*N,N,N',N'*-Tetramethylphosphorodiamidate  
2,4-Dinitrophenylsulfonate

For protection of 1,2- and 1,3-DIOLS, the cyclic acetals and ketals include:

Methylene  
Ethylidene  
    1-*t*-Butylethylidene  
    1-Phenylethylidene

2,2,2-Trichloroethylidene  
Acetonide (Isopropylidene)  
Butylidene  
Cyclopentylidene  
Cyclohexylidene  
Cycloheptylidene  
Benzylidene  
    *p*-Methoxybenzylidene  
    2,4-Dimethoxybenzylidene  
    *p*-Dimethylaminobenzylidene  
    *o*-Nitrobenzylidene  
    *p*- $\odot$ -Benzylidene  
Phenanthrylidene Derivative;

whereas the cyclic ortho esters include:

Methoxymethylene  
Ethoxymethylene  
    Dimethoxymethylene  
1-Methoxyethylidene  
    1,2-Dimethoxyethylidene  
 $\alpha$ -Methoxybenzylidene  
1-(*N,N*-Dimethylamino)ethylidene Derivative  
 $\alpha$ -(*N,N*-Dimethylamino)benzylidene Derivative  
Disiloxanylidene Derivative  
Stannoxane Derivative  
Cyclic Carbonates  
Cyclic Boronates  
    Phenyl Boronate  
    *p*- $\odot$ -Phenyl Boronate

However, the newly introduced paragraphs are not literally present and shown in the original specification. A close inspection of the original claims and specification do not provide antecedent basis for the proposed changes. New matter can not be introduced into specification at any time during the prosecution, unless there is a supporting description that would support the proposed changes. Applicant is required to cancel the new matter in the reply to this Office Action.

**Claim Objections**

1. Applicants' argument filed 12/22/09 have been fully considered but they are not persuasive.

The objection of Claims 8 and,17 have been withdrawn due to the modification of the claims; however, in claim 1 ,there is still the part of the chemical formula(A1) present in the claim; this limitation is belonged to the other groups I, and III-IV.

Therefore, this needs to be removed from the claims.

Appropriate correction is required.

Claims 1-2, 4-6,8-17,19-24 are objected to because of the following informalities:

In Claim 1, the new phrase "selected from ethers, ester, cyclic acetals and ketals, and cyclic ortho ester" is introduced before the phrase "a hydroxyl protective group" .

However, the newly introduced phrases "selected from ethers, ester, cyclic acetals and ketals, and cyclic ortho ester" are not literally present and shown in the original specification. A close inspection of the original claims and specification do not provide antecedent basis for the proposed changes. New matter can not be introduced into specification at any time during the prosecution, unless there is a supporting

description that would support the proposed changes. Applicant is required to cancel the new matter in the reply to this Office Action.

### **Claim Rejections - 35 USC § 112**

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-2, 4-6, 8-17, 19-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In Claim 1, the new phrase "selected from ethers, ester, cyclic acetals and ketals, and cyclic ortho ester" after the phrase "a hydroxyl protective group" is recited. This phrase has not been literally present in the original specification (see page 10, line 23; page 11, line 4, and page 17, lines 18-19). Therefore, the addition of the newly

introduced phrases "selected from ethers, ester, cyclic acetals and ketals, and cyclic ortho ester" to the claim does not provide antecedent basis for the proposed changes.

A close inspection of the original claims and specification do not provide antecedent basis for the proposed changes. New matter can not be introduced into specification at any time during the prosecution, unless there is a supporting description that would support the proposed changes. Applicant is required to cancel the new matter in the reply to this Office Action.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The rejection of Claims 1-2,4-6,8-17,19-21,23-24 under 35 U.S.C. 112, second paragraph, has been withdrawn due to the modification made in the claims. However, in claim 22, there is still some issue to be resolved in the following:

In claim 22, the phrase "formula(I) is obtained from formula(VI)" is recited. This expression is vague and indefinite because the claim does not elaborate how "formula(I) is obtained from formula(VI)"; the skilled artisan in the art is unable to figure out how it is achieved. Appropriate correction is required.

In view of the revised and new claims 22-24, the prior art rejection seems necessary in the followings:

**Claim Rejections - 35 USC § 102**

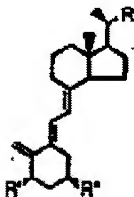
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated clearly by Choudhry et al(J. Org. Chem. , 1993, 58, p. 1496-1500).

Choudhry et al discloses the following compound as shown below(see page 1496, right col.):

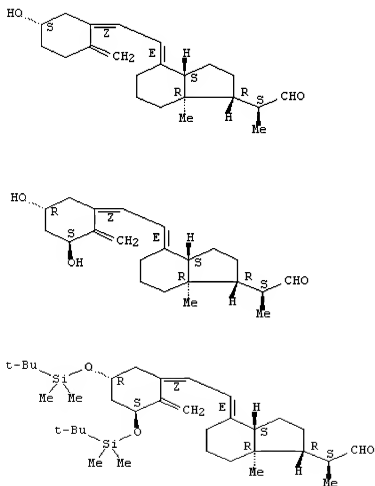


**7 R = CHO; R', R'' = OTBDMS**

This is identical with the claims.

Claims 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated clearly by DeLuca et al(US 4,847,0122).

DeLuca et al et al discloses the following compounds as shown below(see Fig. 1):



These are identical with the claims.

### **Applicants' Argument**

2. Applicants argue the following issues:

- i. Regarding claim 19 , the claim does not require a process step of deriving photosensitizers from anthracene, acridine or phenazine since the attached exhibits B-D do show how they are derived.

Applicants' arguments have been noted, and the arguments are found to be persuasive.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Taylor Victor Oh/

Primary Examiner, Art Unit 1625

3/26/10